

WHAT IS CLAIMED IS:

1. A buoyancy flushing apparatus comprising:

- a reservoir for accumulating liquid, having:
 - . an inlet for receiving liquid;
 - . an outlet chamber recessed in a bottom wall of the reservoir; the outlet chamber including an outlet for draining liquid out of the reservoir;
- an outlet valve movable between a down position where liquid accumulates in the reservoir and a raised position where liquid accumulated in the reservoir is flushed out via the outlet, the outlet valve comprising:
 - . a ballast unit sized and shaped to fit loosely in the outlet chamber when said valve is in the down position;
 - . a float unit topping the ballast unit to move said valve in the raised position by buoyancy when a sufficient amount of liquid is accumulated in the reservoir, thereby providing a passageway for liquid between the bottom wall of the reservoir and the valve leading to the outlet in the outlet chamber to flush liquid out of the reservoir, and
- a guiding means for guiding the outlet valve between the down position and the raised position.

2. A buoyancy flushing apparatus as claimed in claim 1, comprising more than one of said outlets provided in the outlet chamber.

3. A buoyancy flushing apparatus as claimed in claim 1, wherein the ballast and float units are made of foam.

4. A buoyancy flushing apparatus as claimed in claim 1, wherein the ballast and float units of the outlet valve consist of two separated individual units.

5. A buoyancy flushing apparatus as claimed in claim 4, wherein the ballast and float units are made of materials with different densities.

6. A buoyancy flushing apparatus as claimed in claim 1, wherein the ballast and float units are both disc-shaped, the float unit having a larger diameter than the ballast unit.

7. A buoyancy flushing apparatus as claimed in claim 4, wherein the guiding means comprises an upright rod with a lower end connected to a bottom wall of the outlet chamber, the ballast unit and float unit of the outlet valve being mounted on said rod in a slidable manner.

8. A buoyancy flushing apparatus as claimed in claim 7, wherein the guiding means comprises:

- a sleeve slidably mounted on the upright rod, the ballast unit being fixed to the sleeve, whereas the float unit is slidably mounted on the sleeve;

- a high stop secured to the sleeve above the floating unit for stopping an upward movement of the float unit when the float unit is caused to move upwards by buoyancy; and

- a seal secured to the sleeve on top of the ballast unit, the seal being sized to completely close the outlet chamber when the valve is in the down position;

whereby, when the liquid accumulating in the reservoir reaches a first level, the float unit moves upwards by buoyancy until it is stopped by the high stop leaving the ballast unit in the outlet chamber which is closed by the seal, then when the liquid continues to accumulate in the reservoir, an increasing upward pressure starts to exercise on the float unit and the high stop, thereby causing the seal to slightly lift off and allowing liquid to seep there under and causing the ballast unit to trigger off and move upwards to abut on the float unit, thereby opening widely the passageway to the outlet.

9. A buoyancy flushing apparatus as claimed in claim 1, wherein the passageway comprises a first portion extending underneath the float unit of the valve and leading to a second portion extending between the ballast unit of the valve and an inner side wall of the outlet chamber.

10. A buoyancy flushing apparatus as claimed in claim 8, wherein the seal comprises therein a material that prevents bacterial colonization.

11. A buoyancy flushing apparatus as claimed in claim 10, wherein said material is copper.

12. A buoyancy flushing apparatus as claimed in claim 8, wherein the seal is disc-shaped.

13. A buoyancy flushing apparatus as claimed in claim 12, wherein the seal is made of neoprene.

14. A method for flushing a predetermined amount of liquid, comprising the steps of:

- a) providing a flushing apparatus as defined in claim 1; and
- b) accumulating a sufficient amount of liquid in the reservoir to move the outlet valve in the raised position and flush said amount of liquid out of the reservoir.

15. A method as claimed in claim 14, comprising the step of:

- c) repeating step b) after the liquid has been flushed out.